

Athletic Scholarships Are Negatively Associated With Intrinsic Motivation for Sports, Even Decades Later: Evidence for Long-Term Undermining

Arlen C. Moller
Illinois Institute of Technology

Kennon M. Sheldon
University of Missouri-Columbia and National Research
University Higher School of Economics

In the United States, many colleges offer some student athletes scholarships contingent on maintaining high-level performance at a particular sport. Consistent with the well-supported “undermining effect,” studies have demonstrated that such scholarships can reduce athletes’ intrinsic motivation for their sport during their college playing career. The present study examines what happens to former college athletes’ intrinsic motivation after college, even decades later. Three hundred forty-eight former Division I college athletes completed an online survey (67.5% men, $M_{\text{age}} = 49.2$, 76% formerly on scholarship). Even after controlling for time elapsed since college, scholarship (vs. no scholarship) status was positively related to felt external motivation during college, and negatively related to present-day enjoyment of the target sport. Our findings suggest that undermining effects may persist much longer than previously documented (i.e., for decades, as opposed to hours, weeks, or months).

Keywords: the undermining effect, self-determination theory, intrinsic motivation, motivational crowding out, the overjustification effect

Supplemental materials: <http://dx.doi.org/10.1037/mot0000133.supp>

Over 40 years ago, Deci (1971) published two of the first studies demonstrating that offering tangible extrinsic rewards for intrinsically motivated activities (i.e., because they are enjoyable) could reduce individuals’ future intrinsic motivation for those activities (Deci, 1972a, 1972b; Friedman, & Zevevi, 1971; Lepper, Greene, & Nisbett, 1973). This finding came to be called the undermining effect, and has subsequently been replicated in hundreds of studies with varied tasks, samples, and contexts (Moller & Deci, 2014; Ryan & Deci, 2017). The target activity in the majority of these studies has typically been a puzzle or game identified as intrinsically motivating for the average person by earlier pilot testing (e.g., Soma puzzles; other activities have included making

artwork, balancing on a balancing board, and finding words embedded in illustrations).

Unfortunately, few studies have addressed the question of how long the undermining effect persists. Although no study has documented undermining for longer than 17 weeks after a tangible reward contingency was removed (Moller, McFadden, Hedeker, & Spring, 2012), self-determination theory (SDT; Ryan & Deci, 2017) predicts that, if people experience incentives as strongly controlling, undermining may persist indefinitely. By contrast, Goswami and Urminsky’s (2017) effort-balancing account of dynamic postreward behavior predicts that undermining effects are short lived. In a series of five brief (30 min) experiments conducted on the Amazon Mechanical Turk platform, the authors found undermining effects that disappeared after a short break, and became weaker when incentives were relatively large (\$0.50 vs. \$0.05).

The present research examines the potential for studying the undermining phenomenon in a real world context, involving large incentives, and over a far greater duration of time than previously studied (many years, as opposed to minutes, hours, weeks, or months). Specifically, we investigate the potential for athletic scholarships to continue undermining the intrinsic motivation of former college athletes long after their college athletic careers have ended.

College Scholarships and Evidence of Undermining While in College

One of the few research contexts in which intrinsic motivation has been assessed during an extended period of “payment” involves the provision of athletic scholarships to college athletes. Athletic scholarships are regularly used by United States universities that are members of the National Collegiate Athletic Association (NCAA) Division 1, where 50–75% of athletes receive a

This article was published Online First March 21, 2019.

Arlen C. Moller, Department of Psychology, Illinois Institute of Technology; Kennon M. Sheldon, Department of Psychological Science, University of Missouri-Columbia, and International Laboratory of Positive Psychology of Personality and Motivation, National Research University Higher School of Economics.

This study was partially funded by a Russian Academic Excellence Project 5-100 grant awarded to Kennon M. Sheldon. The authors are grateful to Mark White for help identifying appropriate measures, to Pooja Agarwal for her help designing the web survey, to Tom Boren, at the University of Missouri, for providing key assistance with participant recruitment, and to Rachel Kornfield for feedback on an earlier version of this article.

The data from this study can be found at: https://osf.io/a53vn/?view_only=35c9ce94dfd44248865293d11845d74a.

Correspondence concerning this article should be addressed to Arlen C. Moller, Department of Psychology, Illinois Institute of Technology, 3424 South State Street, Tech Central Room 201, Chicago, IL 60616. E-mail: amol@iit.edu

full or partial athletic scholarship (10–100% of their tuition/room/board). At these NCAA Division 1 colleges, less than 10% of the undergraduate students participate in a varsity-level sport, and those who participate make a serious commitment to their participation, averaging approximately 40 hr per week toward playing, practicing, or training (Jacobs, 2015).

This context represents a form of quasi-experiment, as a proportion of student athletes receive athletic scholarships while another proportion do not. Those who receive athletic scholarships are those with greater potentials or performance levels relative to their teammates. To the extent that people tend to enjoy activities more when they excel at them thus satisfying the need for competence (Ryan & Deci, 2017; Ryan & Moller, 2016), this sets up the possibility that students with athletic scholarships enjoy participation more than nonscholarship athletes.

However, despite scholarship recipients presumably feeling more competent, at least seven studies have found that these athletes enjoy playing their sports less than their nonscholarship teammates (Medic, Mack, Wilson, & Starkes, 2007; E. D. Ryan, 1977, 1980; Wagner, Lounsbury, & Fitzgerald, 1989). E. D. Ryan (1977, 1980) found that men's football players on athletic scholarships reported more extrinsic (vs. intrinsic) motivation and less enjoyment of playing football. Wagner et al. (1989) replicated the athletic scholarship undermining pattern in 393 high school and college varsity basketball players. Kingston, Horrocks, and Hanton (2006) collected a sample of 172 United States student athletes from a range of sports and schools, and found overall that receiving athletic scholarships was inversely correlated with intrinsic motivation. Medic et al. (2007) studied student athletes at universities in the United States and Canada and found that NCAA Division 1 men's basketball players in the United States who received athletic scholarships reported higher extrinsic motivation compared with women with scholarships, and compared with nonscholarship athletes (men and women). Cremades, Flournoy, and Gomez (2012) studied track and field athletes at United States universities ($n = 162$); they found that receiving athletic scholarships was inversely correlated with intrinsic motivation, and that the association was stronger for women. Summarizing this literature, Vallerand (2012) explains the crux of this issue through the lens of SDT and cognitive evaluation theory (CET): "unfortunately, scholarship recipients may come to feel that they play more to justify the scholarship they have received than for the pleasure of the game" (p. 69). One exception to this general pattern was reported by E. D. Ryan (1980), who found the expected negative association for men's football, but the opposite for men's wrestlers and female athletes. Consistent with CET, E. D. Ryan suggested the mixed results might be explained by differences in the functional significance of their scholarships, that relative rareness of scholarships for men's wrestling and female athletes at the time might have made them more informational and less controlling.

The present investigation assessed the current motivation of former college athletes (scholarship and nonscholarship) for playing, watching, or otherwise being involved in the sports they had played in college. To our knowledge, this is the first such study.

Hypothesis 1: Guided by SDT, our primary hypothesis was that having had an athletic scholarship during college (yes or no) would predict less intrinsic motivation for participating in the athlete's target sport at the time of the study, years after

graduation. Intrinsic motivation was operationalized in three different ways, including self-reported current enjoyment of: playing the target sport (a), watching the target sport (b), and otherwise participating in the target sport after college, for example, coaching, refereeing, or score keeping (c).

Hypothesis 2: A closely related primary hypothesis was that reporting having felt less relative autonomy while playing college sports would predict less intrinsic motivation for participating in the target sport after college. This included self-reported current enjoyment of: playing the target sport (a), watching the target sport (b), and otherwise participating in the target sport after college, for example, coaching, refereeing, or scoring (c).

Materials and Method

Participants

We were able to persuade the Athletics Department at the University of Missouri to help with the survey. Inclusion criteria required that participants had previously played a varsity-level sport at the University of Missouri (total undergraduate enrollment in 2018: 29,443), and were no longer playing that sport at the university level. Targeted participants received an e-mail invitation to complete the online survey (Qualtrics) sent through the university athletic department's e-mail account. After the e-mail invitation was sent, the survey remained open for 4 weeks.

Four hundred thirty-one surveys were started, and 348 surveys were completed. Sample demographics are reported in Table 1: 67.5% of respondents were men and age range was 23 to 80 years old ($M = 49.20$ years, $SD = 15.77$). Corresponding closely to this ($r = .99$) were participants' estimates of years since the completion of their college sports career ($M = 26.76$ years, $SD = 15.70$, range 1–62).

Two hundred sixty-seven participants (76.7%) reported receiving an athletic scholarship, and 81 (23.3%) reported not receiving any athletic scholarship, a ratio consistent with the University of Missouri's current ratio of scholarship-to-nonscholarship athletes on varsity sport teams. The sample included participants representing football ($n = 96$), track and field ($n = 43$), swimming ($n = 42$), baseball ($n = 24$), wrestling ($n = 23$), basketball ($n = 22$), tennis ($n = 18$), golf ($n = 15$), cross country ($n = 13$), softball ($n = 11$), soccer ($n = 11$), gymnastics ($n = 11$), and volleyball ($n = 10$; we did not attempt to compare results between sports). Participation was entirely voluntary, with no tangible compensation provided. No significant associations were found between scholarship status and age, years since completion of college sports career, socioeconomic status (SES; during college or current), gender, or race.

Measures

Demographics. Participants reported their age, sex, race, ethnicity, and SES and also reported the sport(s) they played in college, how many seasons they played each sport, and whether they received a full or partial athletic scholarship (yes or no).

Self-Regulation Questionnaire for varsity sport participation while in college. Participants completed a revised version of the previously validated Self-Regulation Questionnaire for Exer-

Table 1
Demographics

Variables	Overall (<i>n</i> = 348; 100%)	Scholarship (<i>n</i> = 267; 76.7%)	No scholarship (<i>n</i> = 81; 23.3%)
Age in years (<i>n</i> = 337)			
<i>M</i> (<i>SD</i>)	49.20 (15.77)	48.64 (15.89)	51.06 (15.31)
Range	23–80	23–80	24–80
Gender, <i>N</i> (%; <i>n</i> = 342)			
Female	110 (32.2)	90 (34.4)	20 (25)
Male	231 (67.5)	171 (65.3)	60 (75)
Other	1 (.2)	1 (.4)	0 (0)
Race, <i>N</i> (%; <i>n</i> = 340)			
White	316 (92.9)	242 (92.7)	74 (93.7)
Black	18 (5.3)	15 (5.7)	3 (3.8)
Other	6 (1.8)	4 (1.2)	2 (2.6)
Years post college (<i>n</i> = 332)			
<i>M</i> (<i>SD</i>)	26.76 (15.70)	26.28 (15.79)	28.32 (15.39)
Range	1–62	1–62	2–59
SES during college (<i>n</i> = 339)			
(1–9 scale); <i>M</i> (<i>SD</i>)	4.91 (1.85)	4.93 (1.86)	4.82 (1.84)
SES now (<i>n</i> = 339)			
(1–9 scale); <i>M</i> (<i>SD</i>)	6.59 (1.33)	6.57 (1.36)	6.65 (1.19)

Note. SES = socioeconomic status.

cise (Ryan & Connell, 1989) in order to assess different types of motivational regulation toward playing sports while in college. Participants were asked to rate reasons why they participated in college sports on a 7-point Likert scale ranging from 1 (*not at all true*) to 7 (*very true*). The four reasons for participating in college sports (items) were: “Because it was fun” (intrinsic), “Because I valued being in good physical condition” (identified), “Because I would have been ashamed of myself if I quit” (introjected), and “Because of money or scholarships I received in exchange for playing” (external). An aggregated unweighted Relative Autonomy Index (RAI) was computed to locate participants on the internalization continuum: RAI = intrinsic + identified – introjected – external (Sheldon, Osin, Gordeeva, Suchkov, & Sychev, 2017).

Current intrinsic motivation for target sport. Current intrinsic motivation related to the participants’ target sport (the outcome measure) was assessed using the four interest/enjoyment items from the Intrinsic Motivation Inventory. These items were asked with respect to: (a) playing the target sport, (b) watching the target sport, and (c) otherwise participating in the target sport (coaching, refereeing, facilitating). Participants rate how true each of 12 statements was for them on a 7-point Likert scale ranging from 1 (*not at all true*) to 7 (*very true*).

Results

Given the population and sample size asymmetry between the groups (scholarship vs. nonscholarship), we conducted a Levene’s test for homogeneity of variance for the three primary outcome variables: enjoy playing, enjoy watching, and enjoy otherwise participating. The null hypothesis that the variance is equal across groups was violated for only one of three primary outcomes: enjoy playing ($p = .03$). However, a closer examination revealed that the variance was smaller for the smaller group, $SD = 2.239$ (for nonscholarship athletes) versus $SD = 2.4440$ (for scholarship athletes), reducing concern. Furthermore, we used the Welch

ANOVA test, a more robust test when there is heterogeneity of variance and unequal groups, to better account for this issue (Moder, 2010).

Hypothesis 1: Scholarship status (yes/no) significantly predicted less current enjoyment while playing the target sport (H_{1a} : $M_s = 3.66$ vs. 4.44 ; Welch statistic $F(1, 140.65) = 7.04$, $p = .009$; $\omega_p^2 = .017$, with or without controlling for years since college. Scholarship status was not significantly related to current enjoyment of watching (H_{1b}), or otherwise participating in the sport (H_{1c} ; Table 2).

Hypothesis 2: Retrospective RAI scores were significantly correlated with currently enjoying playing the target sport ($r = .17$, $p < .001$), and otherwise participating in the sport ($r = .11$, $p = .044$), even after controlling for years since college. RAI scores were not significantly related to currently enjoying watching the sport ($r = -.01$, $p = .79$). Examining the components of the RAI separately, both retrospective intrinsic motivation ($r = .13$, $p = .01$) and external motivation ($r = -.17$, $p < .01$) were significantly related to current enjoyment for playing the target sport, including after controlling for years since college (Tables 2 and 3).

Mediators

For the reader’s information, we tested whether aggregate retrospective RAI score or any of the four specific motivation variables mediated the effects of scholarship status upon current intrinsic motivation. First we used a series of independent samples t tests to explore the hypothesis that scholarship status would predict retrospective reports of relative autonomy (RAI) and its components: intrinsic regulation, identified regulation, introjected regulation, and external regulation (i.e., X to M, or path a). Those who received athletic scholarships did report lower RAI; this difference was driven by higher levels of external and introjected regulation.

Table 2
Mean Current Intrinsic Motivation and Retrospective Regulation for Former Scholarship and Nonscholarship Athletes

Outcome variable	<i>n</i>	<i>M (SD)</i>	<i>t</i>	<i>p</i>	η^2
Current enjoyment playing					
Scholarship	264	3.66 (2.44)	2.53	.01	.018
No scholarship	80	4.44 (2.24)			
Current enjoyment watching					
Scholarship	266	5.86 (1.48)	.54	.59	.001
No scholarship	80	5.95 (1.30)			
Current enjoyment otherwise participating					
Scholarship	262	4.07 (2.52)	.48	.63	.001
No scholarship	77	3.91 (2.57)			
Retrospective intrinsic regulation					
Scholarship	264	6.12 (1.40)	1.15	.25	.003
No scholarship	81	6.28 (1.26)			
Retrospective identified regulation					
Scholarship	264	5.31 (1.81)	.50	.61	<.001
No scholarship	80	5.26 (1.78)			
Retrospective introjected regulation					
Scholarship	264	3.39 (2.45)	3.92	<.001	.027
No scholarship	81	2.46 (2.08)			
Retrospective external regulation					
Scholarship	264	4.82 (2.20)	13.59	<.001	.394
No scholarship	80	1.13 (.56)			
Relative Autonomy Index					
Scholarship	263	3.22 (4.42)	3.44	.001	.194
No scholarship	80	8.01 (3.01)			

To test the significance of the mediation effect, we used Preacher and Hayes' (Hayes, 2013) method and calculated 5,000 bootstrapped samples to estimate the 95% bias corrected and accelerated confidence intervals (CIs) of the indirect effect. We also conducted the traditional mediation significance test (i.e., Sobel test). Since only current enjoyment for actually playing the sport differed between the two groups, we only tested mediation for this variable. Composite RAI, external regulation, and introjected regulation were tested as potential mediators. For composite RAI, near-significant mediation existed according to the Preacher and Hayes method, indirect $b = -.29$, 95% CI $[-.59, -.003]$; similar findings were obtained with the Sobel test ($z = -1.92$, $p = .054$). External regulation alone was also a near-significant mediator according to the Preacher and Hayes method, indirect $b = -.09$, 95% CI $[-.17, -.002]$; significant according to the Sobel test ($z = -2.08$, $p = .038$). No other RAI component (introjected, identified, or intrinsic regulation) mediated.

Moderators

Supplementary analyses (provided online) several potential moderators of the effect of prior scholarship status on current enjoyment of playing the sport: gender, time since college, sport played, and SES during college. Two noteworthy findings were that (a) more time elapsed since college predicted less enjoyment of playing the target sport (older participants enjoy playing less), and that (b) time elapsed since college moderated the scholarship versus no scholarship effect, such that the undermining effect became slightly but significantly weaker over time. Another noteworthy finding was that gender moderated the scholarship effect, such that the undermining effect was more pronounced in male participants. Student's SES at the time of college had no moderator effects, and neither did the student's sport, dichotomized as football (the biggest money-making sport) versus not football.

Table 3
Zero-Order (and Partial) Correlations Between Retrospective Self-Regulation for Playing in College and Current Enjoyment of Target Sport

Motivation variables	Current enjoyment playing	Current enjoyment watching	Current enjoyment otherwise participating
Retrospective intrinsic regulation for playing	.13* (.16**)	.13* (.17**)	.15** (.19**)
Retrospective identified regulation for playing	.07 (.06)	<.01 (<.01)	.05 (.03)
Retrospective introjected regulation for playing	.01 (-.02)	.09† (.07)	-.02 (-.03)
Retrospective external regulation for playing	-.17** (-.18**)	.02 (.01)	-.04 (-.04)
Composite Relative Autonomy Index	-.15** (.18**)	-.01 (.01)	.10† (.11†)

Note. Zero-order correlations (partial correlations). Partial correlations control for years since college.

† $p < .10$. * $p < .05$. ** $p < .01$.

Discussion

Hundreds of experiments replicating the undermining effect have been conducted in tightly controlled lab contexts for relatively short periods of time (typically for 30–60 min). By comparison, only a small handful of field studies have been conducted and, to the best of our knowledge, no study has documented undermining for longer than 17 weeks after a tangible reward contingency was removed (Moller et al., 2012; but see White & Sheldon, 2014). Consistent with SDT, but not Goswami and Urminsky's (2017) effort-balancing account of dynamic postreward behavior, our research found evidence for long-term undermining, much longer than previously documented, given that participants in the present study left college an average of 26 years earlier. Although the negative association between scholarship status and current enjoyment for playing the target sport was somewhat reduced by time since college, the main effect for scholarship status remained consistent even after controlling for this interaction. The moderation of Scholarship Status $\times$ Time Since College might represent a cohort effect in which in recent times, scholarship status has become more undermining. It might also represent a decay effect, in which the undermining effect weakens over time. The current data do not permit comparing these two explanations.

We also found that the sense of having strong external motivation while playing in college was significantly stronger in scholarship athletes, which helped explain their reduced interest in playing the sport after college. As such, this external reward effect represents a classic undermining effect of intrinsic motivation by external motivation. We also found that the undermining effects were smaller in female athletes than in male athletes, an effect consistent with earlier findings reported by E. D. Ryan (1980). This may reflect the fact that female college athletics have historically received less intense public scrutiny, financial investment, and associated pressure in the United States (Zimbalist, 2001).

It is interesting that many commentators (Crabtree, 2014; Nocera, 2011; Ukeiley, 1996) argue that student athletes should receive more of the financial benefit that they help to produce for their institutions of learning. While this may be true, our findings suggest that paying student athletes might have the undesirable side effect of making them even less interested in playing the game after their college days are over. SDT provides mechanisms for explaining how financial rewards may be delivered such that they do not undermine intrinsic motivation (i.e., if they are delivered in a way that conveys competence information, rather than being delivered in a controlling way). However, we did not measure such variables and will not speculate further in this brief report.

Limitations

This study surveyed athletes at only one NCAA Division 1 school, raising questions about generalizability to other schools or programs. Unfortunately, the several other universities that we approached were reluctant to help us with the study. It is also possible that a self-selection bias influenced our results, since those who chose to participate might have an axe to grind or may not be representative of all scholarship athletes. Another important limitation involves our reliance on cross-sectional data and retrospective self-reports of scholarship status and RAI while in college. For more than half of the sample, these retrospective reports required reflecting on their experience more than 20 years earlier;

such memories are susceptible to both bias and decay. The failure to preregister hypotheses and number of tests are additional limitations. Follow-up research using more costly longitudinal designs are still warranted in order to rule out unmeasured third variables and strengthen confidence in casual attributions. We hope that the preliminary research reported here can help justify the significant investment required to carry out such research in the future.

Compliance With Ethical Standards

All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards. Informed consent was obtained from all individual participants included in the study.

References

- Crabtree, J. (July 22, 2014). Recruits support athletes' stipends. *ESPN*. Retrieved from http://espn.go.com/college-sports/recruiting/football/story/_/id/11240742/espn-survey-shows-most-football-recruits-support-stipends-college-players-playoff-system-determine-champion
- Cremades, J. G., Flournoy, B., & Gomez, C. B. (2012). Scholarship status and gender differences in motivation among U.S. collegiate track and field athletes. *International Journal of Sports Science & Coaching*, 7, 333–344. <http://dx.doi.org/10.1260/1747-9541.7.2.333>
- Deci, E. L. (1971). Effects of externally mediated rewards on intrinsic motivation. *Journal of Personality and Social Psychology*, 18, 105–115. <http://dx.doi.org/10.1037/h0030644>
- Deci, E. L. (1972a). Effects of contingent and non-contingent rewards and controls on intrinsic motivation. *Organizational Behavior & Human Performance*, 8, 217–229. [http://dx.doi.org/10.1016/0030-5073\(72\)90047-5](http://dx.doi.org/10.1016/0030-5073(72)90047-5)
- Deci, E. L. (1972b). Intrinsic motivation, extrinsic reinforcement, and inequity. *Journal of Personality and Social Psychology*, 22, 113–120. <http://dx.doi.org/10.1037/h0032355>
- Goswami, I., & Urminsky, O. (2017). The dynamic effect of incentives on postreward task engagement. *Journal of Experimental Psychology: General*, 146, 1–19. <http://dx.doi.org/10.1037/xge0000206>
- Hayes, A. F. (2013). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach*. New York, NY: Guilford Press.
- Jacobs, P. (2015). Here's the insane amount of time student-athletes spend on practice. *Business Insider*. Retrieved from <http://www.businessinsider.com/college-student-athletes-spend-40-hours-a-week-practicing-2015-1>
- Kingston, K. M., Horrocks, C. S., & Hanton, S. (2006). Do multidimensional intrinsic and extrinsic motivation profiles discriminate between athlete scholarship status and gender? *European Journal of Sport Science*, 6, 53–63. <http://dx.doi.org/10.1080/17461390500440889>
- Kruglanski, A. W., Friedman, I., & Zeevi, G. (1971). The effects of extrinsic incentive on some qualitative aspects of task performance. *Journal of Personality*, 39, 606–617. <http://dx.doi.org/10.1111/j.1467-6494.1971.tb00066.x>
- Lepper, M. R., Greene, D., & Nisbett, R. E. (1973). Undermining children's intrinsic interest with extrinsic rewards: A test of the "overjustification" hypothesis. *Journal of Personality and Social Psychology*, 28, 129–137. <http://dx.doi.org/10.1037/h0035519>
- Medic, N., Mack, D. E., Wilson, P. M., & Starkes, J. L. (2007). The effects of athletic scholarships on motivation in sport. *Journal of Sport Behavior*, 30, 292–306.

- Moder, K. (2010). Alternatives to *F*-test in one way ANOVA in case of heterogeneity of variances (a simulation study). *Psychological Test and Assessment Modeling*, 52, 343–353.
- Moller, A. C., & Deci, E. L. (2014). The psychology of getting paid: An integrated perspective. In E. H. Bijleveld & H. Aarts (Eds.), *The psychological science of money* (pp. 189–211). New York, NY: Springer Press. http://dx.doi.org/10.1007/978-1-4939-0959-9_9
- Moller, A. C., McFadden, H. G., Hedeker, D., & Spring, B. (2012). Financial motivation undermines maintenance in an intensive diet and activity intervention. *Journal of Obesity*, 2012, 740519. <http://dx.doi.org/10.1155/2012/740519>
- Nocera, J. (2011, December 20). Let's start paying student athletes. *The New York Times*. Retrieved from http://www.nytimes.com/2012/01/01/magazine/lets-start-paying-college-athletes.html?pagewanted=all&_r=0
- Ryan, E. D. (1977). Attribution, intrinsic motivation, and athletics. In L. I. Gedvilas & M. E. Kneer (Eds.), *National College Physical Education Association for Men/National Association for Physical Education of College Women. National conference* (pp. 346–353). Chicago, IL: Office of Publications Services.
- Ryan, E. D. (1980). Attribution, intrinsic motivation, and athletics: A replication and extension. In C. H. Nadeau, W. R. Halliwell, K. M. Newell, & G. C. Roberts (Eds.), *Psychology of motor behavior and sport* (pp. 19–26). Champaign, IL: Human Kinetics.
- Ryan, R. M., & Connell, J. P. (1989). Perceived locus of causality and internalization: Examining reasons for acting in two domains. *Journal of Personality and Social Psychology*, 57, 749–761. <http://dx.doi.org/10.1037/0022-3514.57.5.749>
- Ryan, R. M., & Deci, E. L. (2017). *Self-determination theory: Basic psychological needs in motivation, development, and wellness*. New York, NY: Guilford Press.
- Ryan, R. M., & Moller, A. C. (2016). Competence as a necessary but not sufficient condition for high quality motivation: A self-determination theory perspective. In A. Elliot, C. Dweck, & D. Yeager (Eds.), *Handbook of competence motivation* (2nd ed., pp. 214–231). New York, NY: Plenum Press.
- Sheldon, K. M., Osin, E. N., Gordeeva, T. O., Suchkov, D. D., & Sychev, O. A. (2017). Evaluating the dimensionality of self-determination theory's relative autonomy continuum. *Personality and Social Psychology Bulletin*, 43, 1215–1238. <http://dx.doi.org/10.1177/0146167217711915>
- Ukeiley, S. L. (1996). No salary, no union, no collective bargaining: Scholarship athletes are an employer's dream come true. *Seton Hall Journal of Sport Law*, 6, 167.
- Vallerand, R. J. (2012). Intrinsic and extrinsic motivation in sport and physical activity: A review and a look at the future. In G. Tenenbaum & E. Eklund (Eds.), *Handbook of sport psychology* (3rd ed., pp. 59–83). New York, NY: Wiley. <http://dx.doi.org/10.1002/9781118270011.ch3>
- Wagner, S. L., Lounsbury, J. W., & Fitzgerald, L. G. (1989). Attribute factors associated with work/leisure perceptions. *Journal of Leisure Research*, 21, 155–166. <http://dx.doi.org/10.1080/00222216.1989.11969796>
- White, M. H., & Sheldon, K. M. (2014). The contract year syndrome in the NBA and MLB: A classic undermining pattern. *Motivation and Emotion*, 38, 196–205. <http://dx.doi.org/10.1007/s11031-013-9389-7>
- Zimbalist, A. (2001). *Unpaid professionals: Commercialism and conflict in big-time college sports*. Princeton, NJ: Princeton University Press. <http://dx.doi.org/10.1515/9781400823079>

Received July 31, 2018

Revision received February 11, 2019

Accepted February 11, 2019 ■